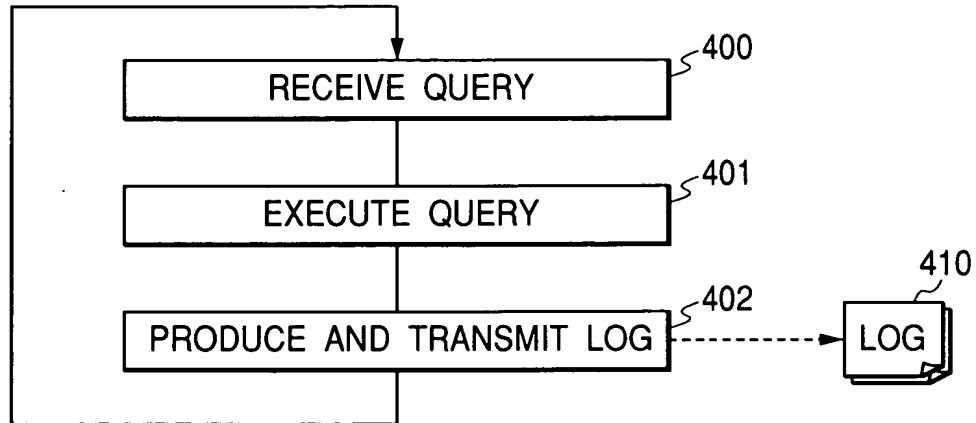




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**FIG. 2**

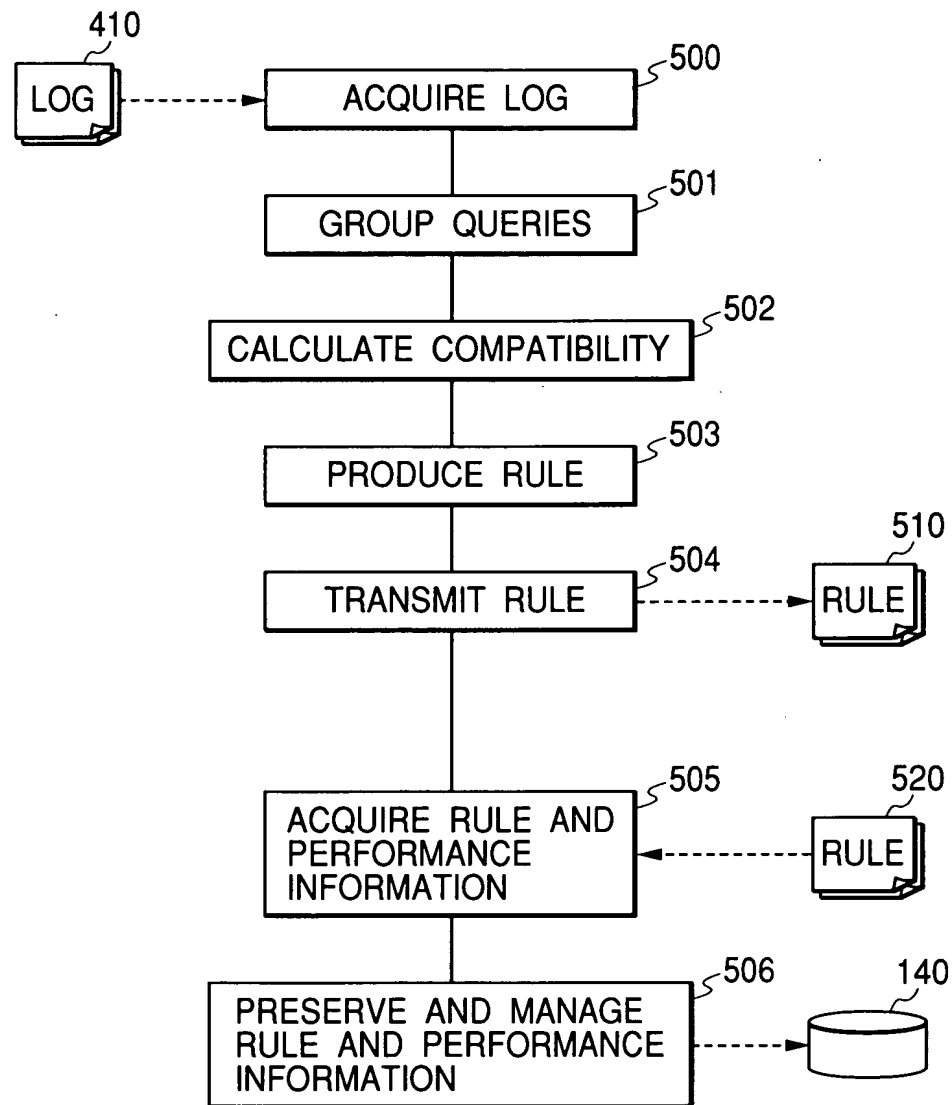


**FIG. 3**

	700 CONTENTS OF QUERY	701 PROCESSING TIME	702 START TIME INSTANT	703 END TIME INSTANT	704 USER NAME
710	select ...	2200	19:05 22.02	19:05 24.22	Scott
720	select ...	1500	19:05 25.00	19:05 26.50	John

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**FIG. 4**



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**FIG. 5A**

EXAMPLE OF GROUPING 1

#	TEMPLATE	CONTENTS OF QUERY
1	A	select a from A where b > 2
		select a, b from A
2	B	select a from B where c > 3
		select a, c from B where b > 3

**FIG. 5B**

EXAMPLE OF GROUPING 2

#	TEMPLATE	CONTENTS OF QUERY
1	{a}, {A}	select a from A where b > 2
		select a from A
2	{a, c}, {A}	select a, c from A where c > 3
		select a, c from A where d > 3

**FIG. 5C**

EXAMPLE OF GROUPING 3

#	TEMPLATE	CONTENTS OF QUERY
1	{a}, {A}, {b}	select a from A where b > 2
		select a from A where b > 30
2	{a}, {A}, {c}	select a from A where c > 3
		select a from A where c > 5

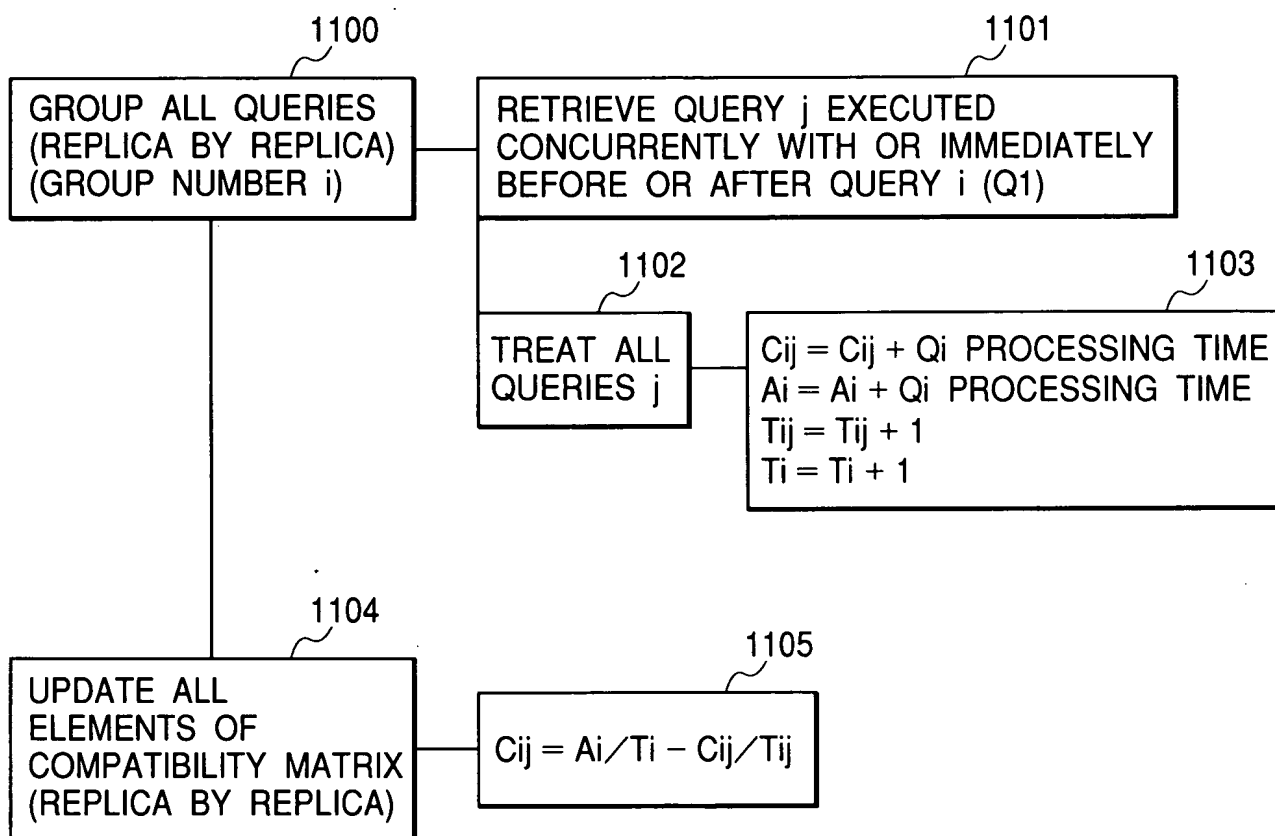


**FIG. 7B**

Diagram illustrating a matrix structure 810. The matrix has rows labeled Q1, Q2, ..., Qj, ..., Qn and columns labeled T1, Tj, ..., Tn. A specific element Tij is highlighted. Labels 811, 812, 813, and 814 point to various parts of the matrix structure.

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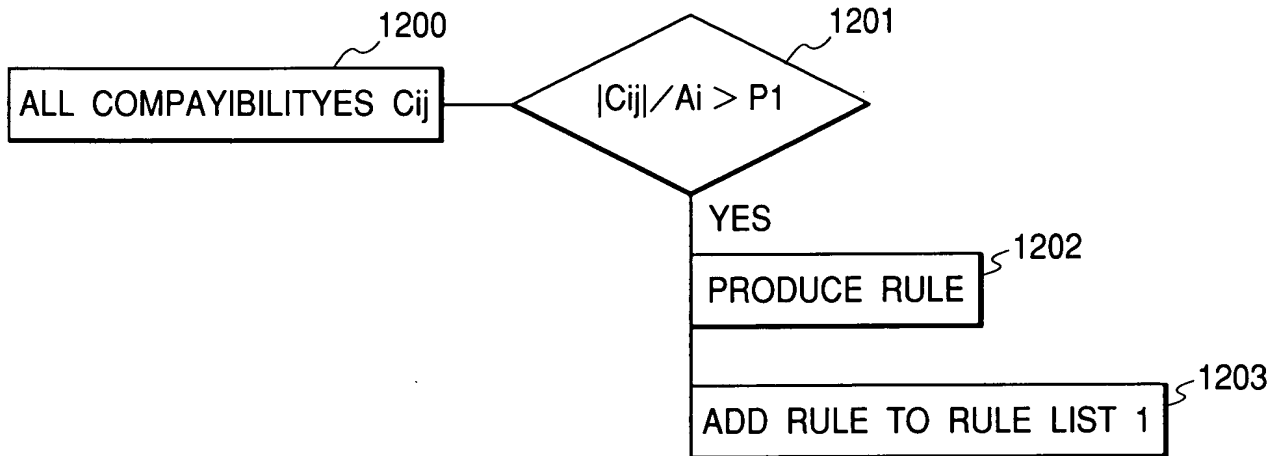
**FIG. 8**



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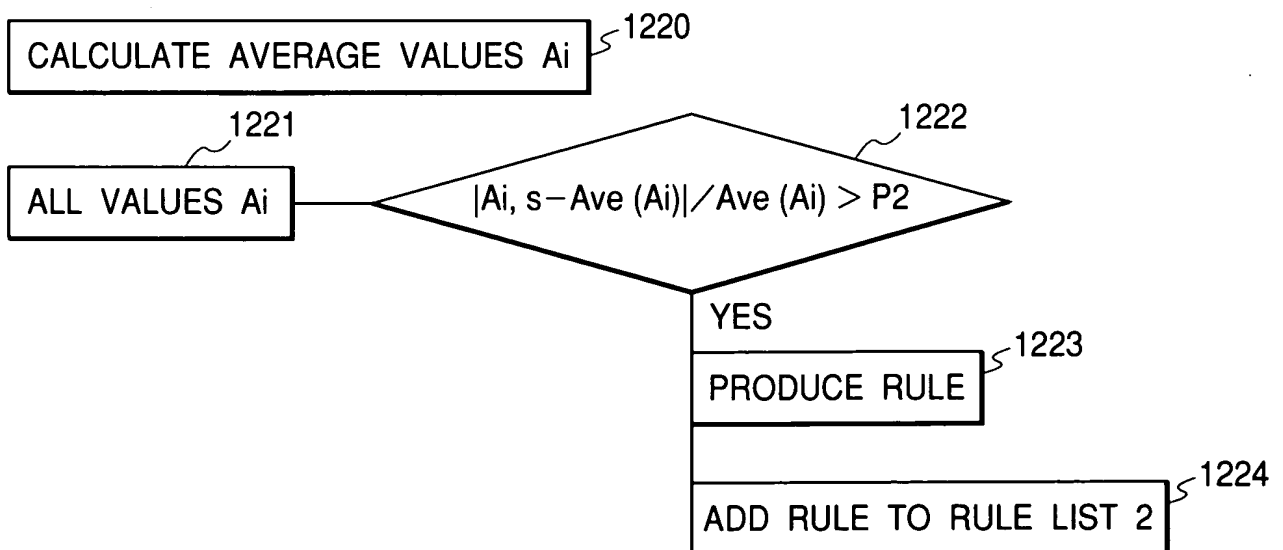
## FIG. 9A

PRODUCING RULE FOR COMPATIBILITY BETWEEN QUERIES



## FIG. 9B

PRODUCING RULE FOR COMPATIBILITY BETWEEN QUERY AND SERVER



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**FIG. 10A**

RULE LIST 1  
(RULE FOR COMPATIBILITY BETWEEN QUERIES)

1911 CONDITION	1912 COMPATIBILITY VALUE	1913 FREQUENCY
1914 Q1, Q2	20	0
Q1, Q7	10	0
...	...	...

1910

**FIG. 10B**

RULE LIST 2  
(RULE FOR COMPATIBILITY BETWEEN QUERIES)

1931 CONDITION	1932 COMPATIBILITY VALUE	1933 FREQUENCY
1934 Q1, S2	20	0
Q1, S4	-10	0
...	...	...

1930



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**FIG. 11A**

COMPATIBILITY MATRIX

801 {

	Q1	Q2	...	Qj	...	Qn	
Q1							A11
...							...
Qi				Cij			Ai1
...							...
...							...
Qn							An1

802

800

803

804

**FIG. 11B**

CALL MATRIX

REPLICA 1

	Q1	Q2	...	Qj	...	Qn	
Q1							T11
...							...
Qi				Tij			Ti1
...							...
...							...
Qn							Tn1

812

810

811

813

814

REPLICA 2

	Q1	Q2	...	Qj	...	Qn	
Q1							A12
...							...
Qi				Cij			Ai2
...							...
...							...
Qn							An2

	Q1	Q2	...	Qj	...	Qn	
Q1							T12
...							...
Qi				Tij			Ti2
...							...
...							...
Qn							Tn2

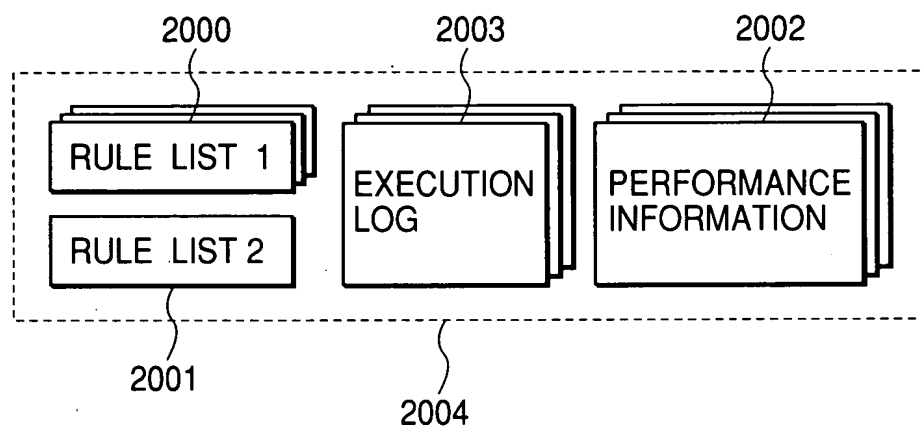
REPLICA 3

	Q1	Q2	...	Qj	...	Qn	
Q1							A13
...							...
Qi				Cij			Ai3
...							...
...							...
Qn							An3

	Q1	Q2	...	Qj	...	Qn	
Q1							T13
...							...
Qi				Tij			Ti3
...							...
...							...
Qn							Tn3

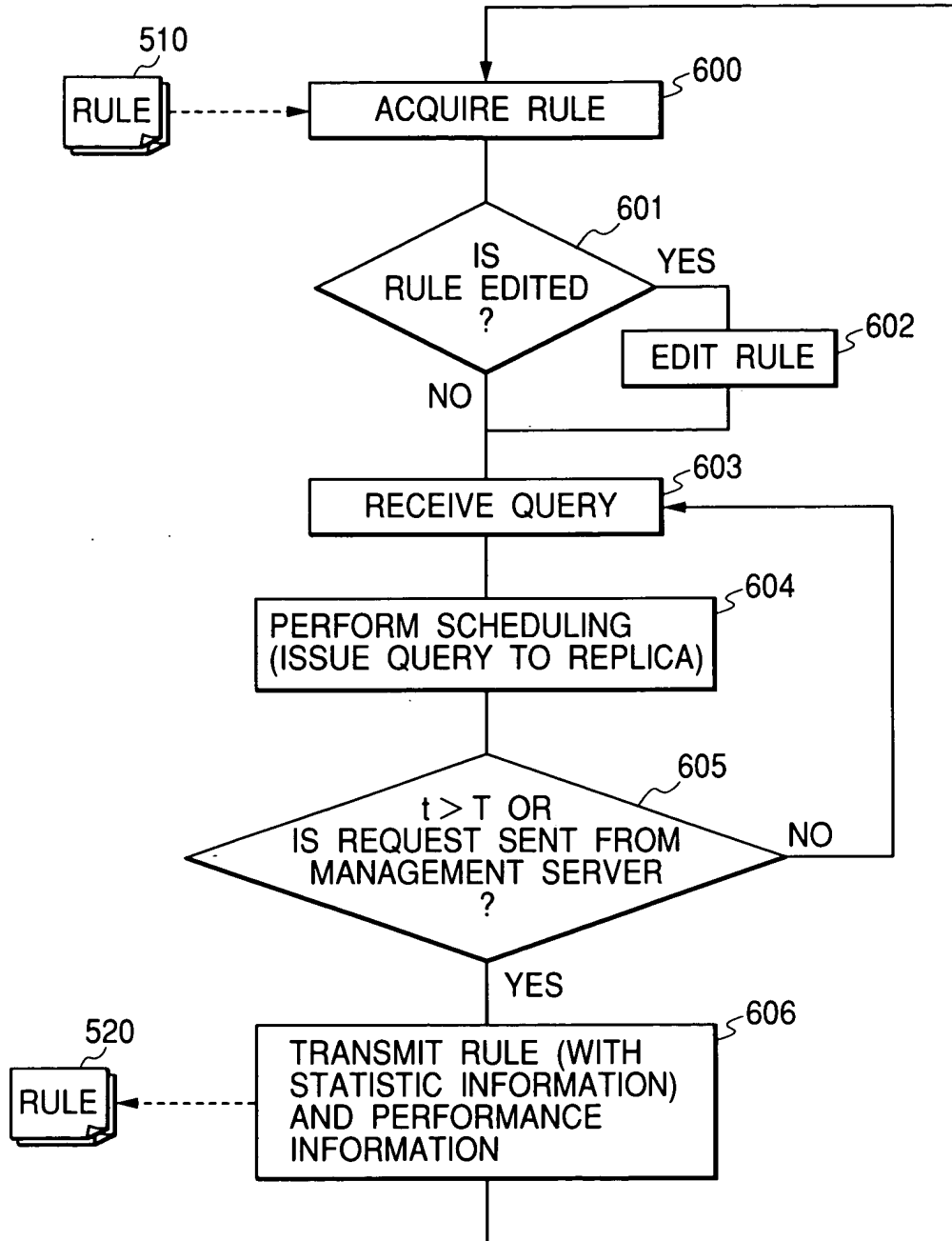
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**FIG. 12**



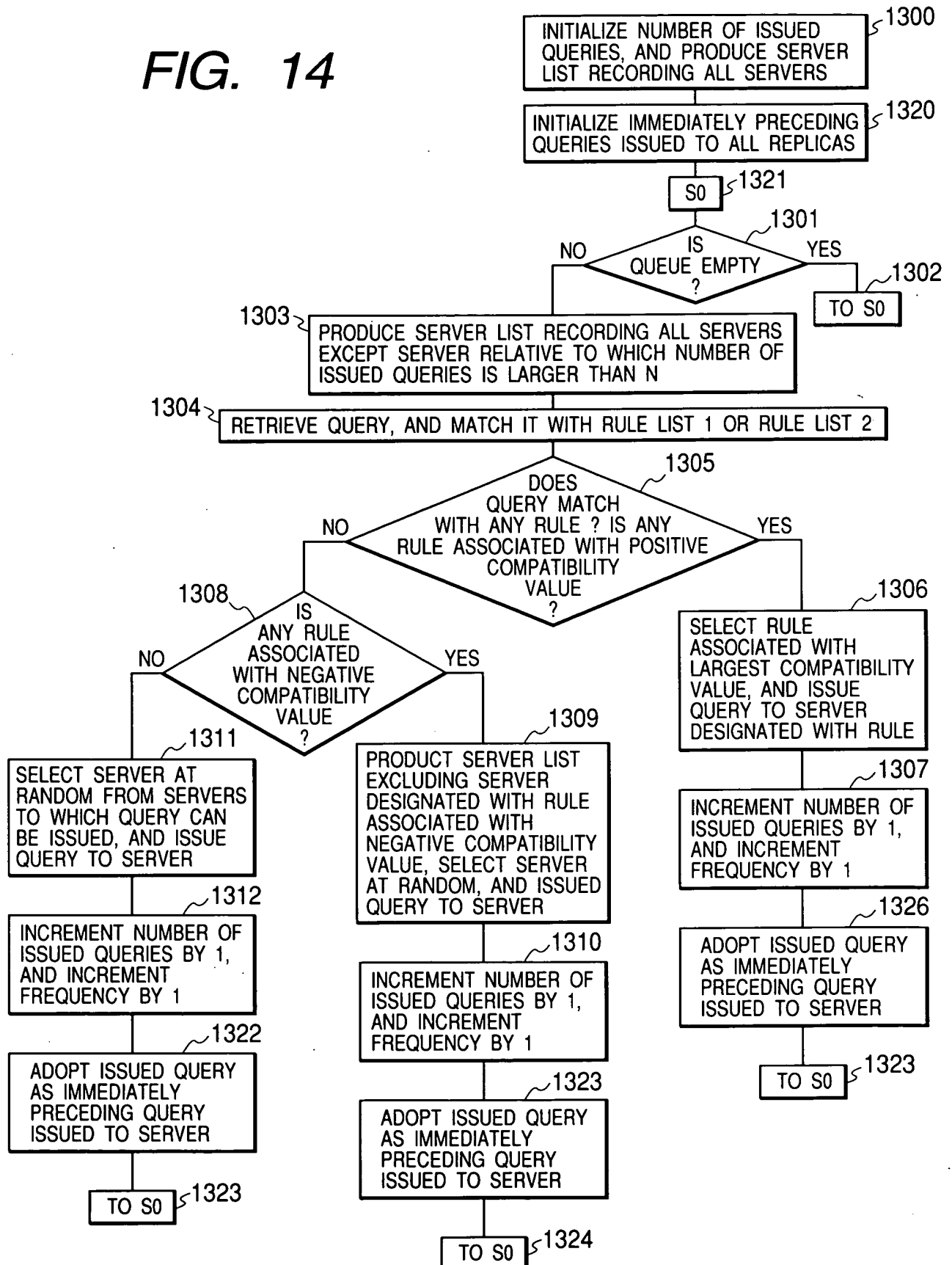
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**FIG. 13**



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FIG. 14



**FIG. 15A**

CORRELATION MATRIX

2102

	U1	U2	...	Uj	...	Un	
U1							A1
...							...
Ui				Cij			Ai
...							...
...							...
Un							An

2101

2104

2103

2100

**FIG. 15B**

CALL MATRIX

2112

	U1	U2	...	Uj	...	Un	
U1							T1
...							...
Ui				Tij			Ti
...							...
...							...
Un							Tn

2111

2114

2113

2110

**FIG. 15C**RULE LIST 3  
(RULE FOR COMPATIBILITY BETWEEN USERS)

2131

2132

2134

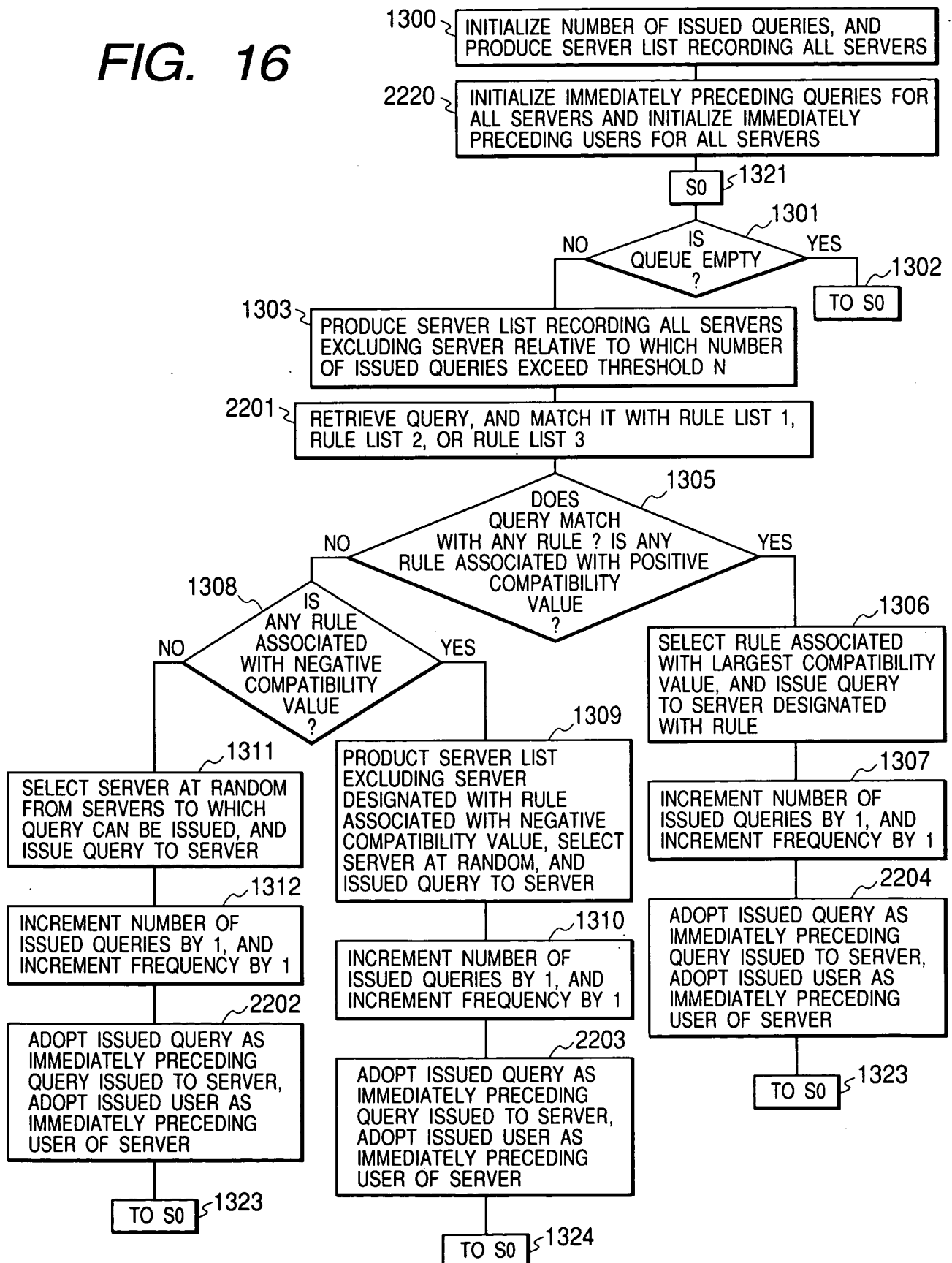
CONDITION	COMPATIBILITY VALUE	FREQUENCY
U1, U2	20	0
U1, U4	-10	0
...	...	...

2133

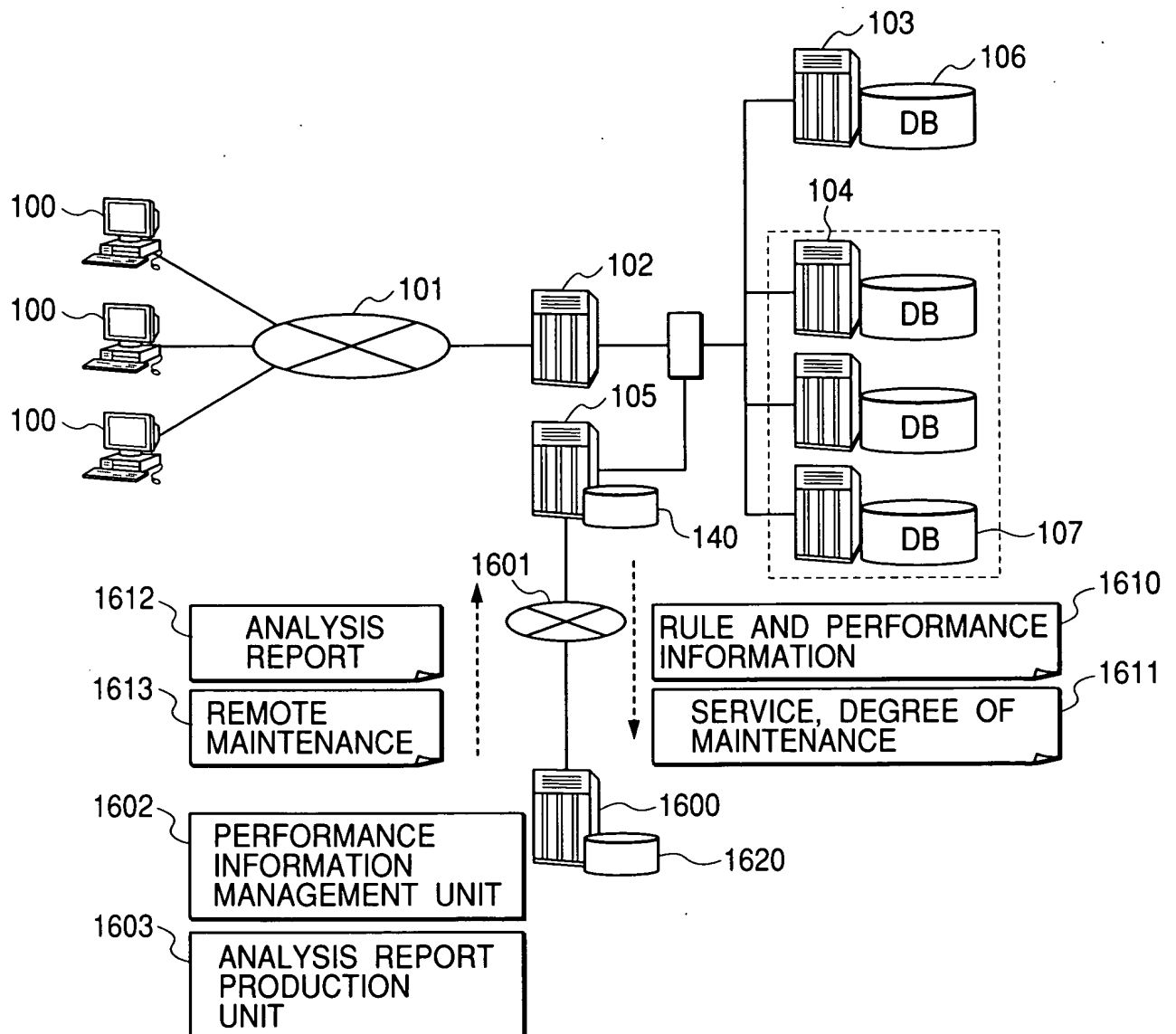
2130

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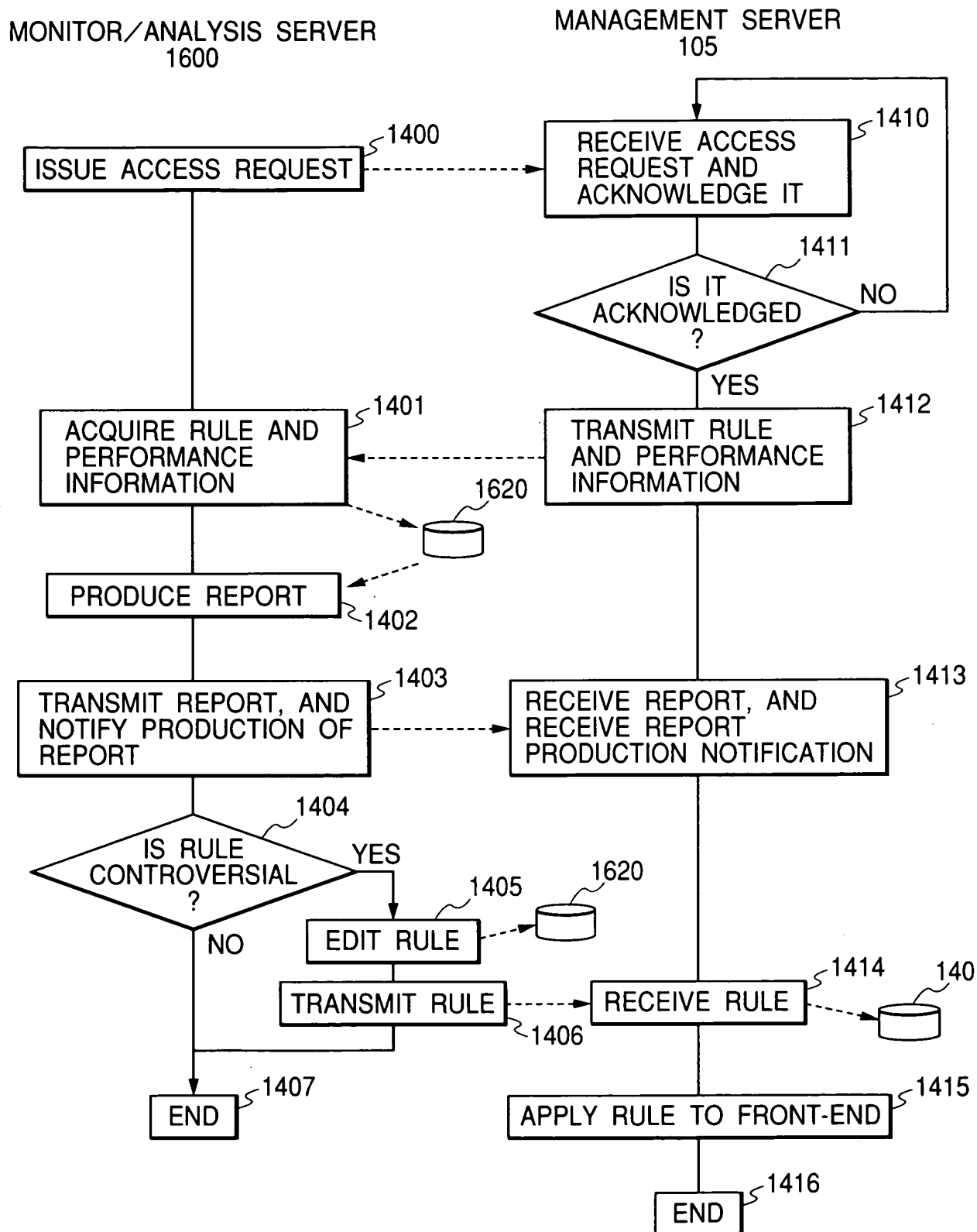
FIG. 16



**FIG. 17**



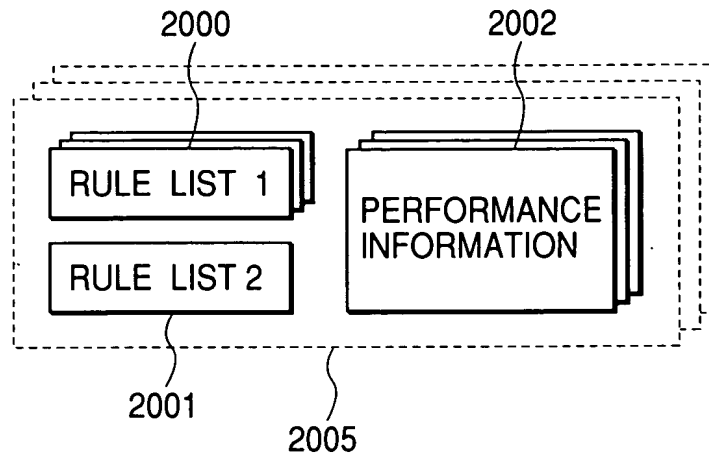
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**FIG. 18**

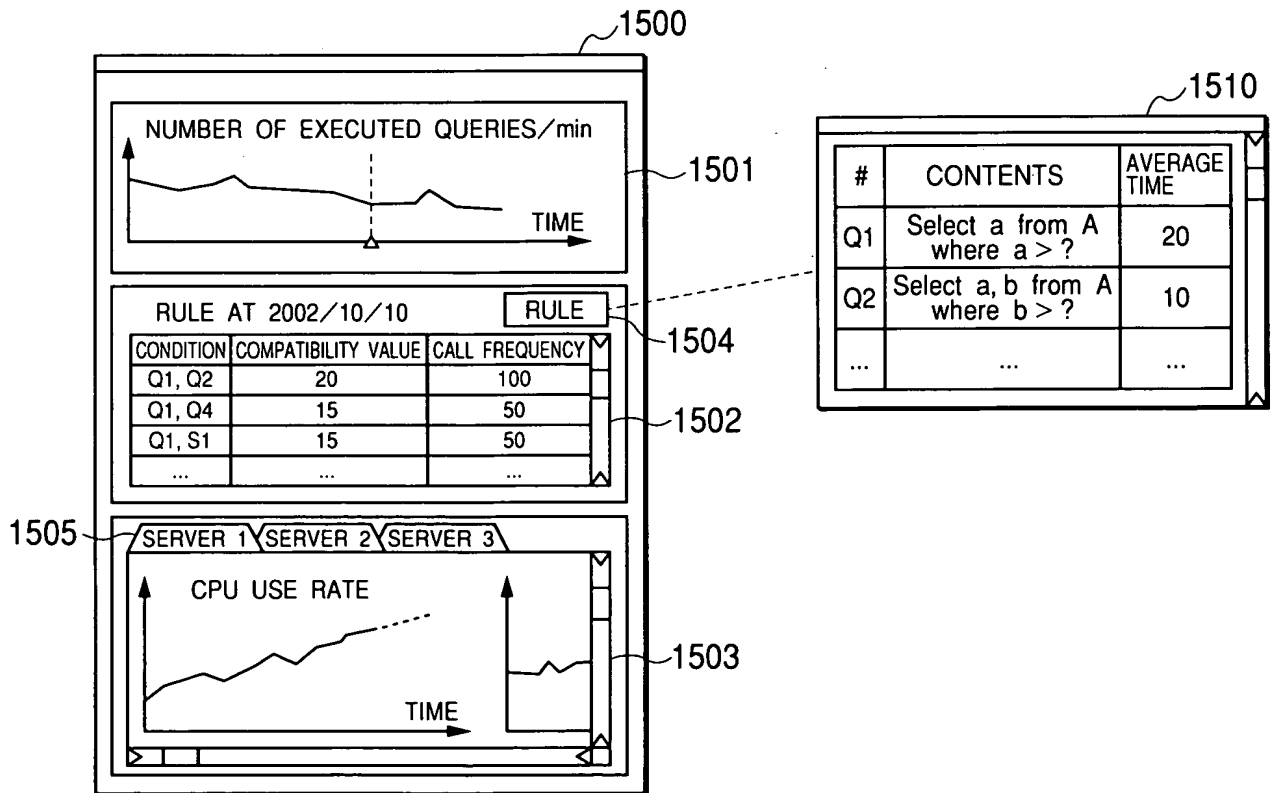


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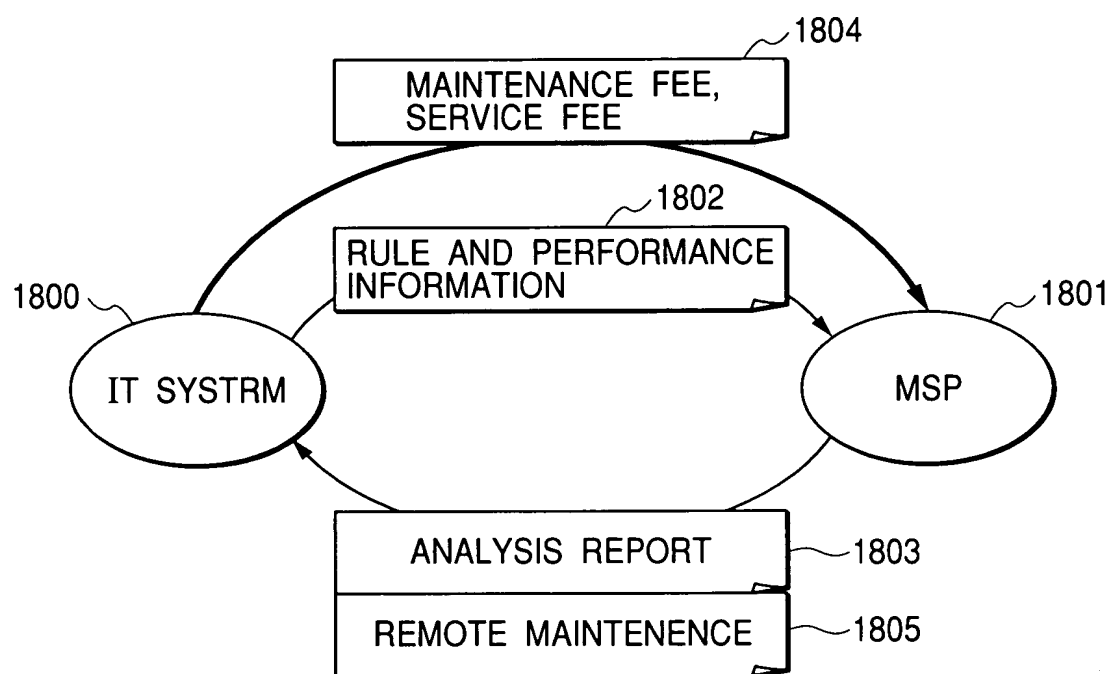
**FIG. 19**



**FIG. 20**

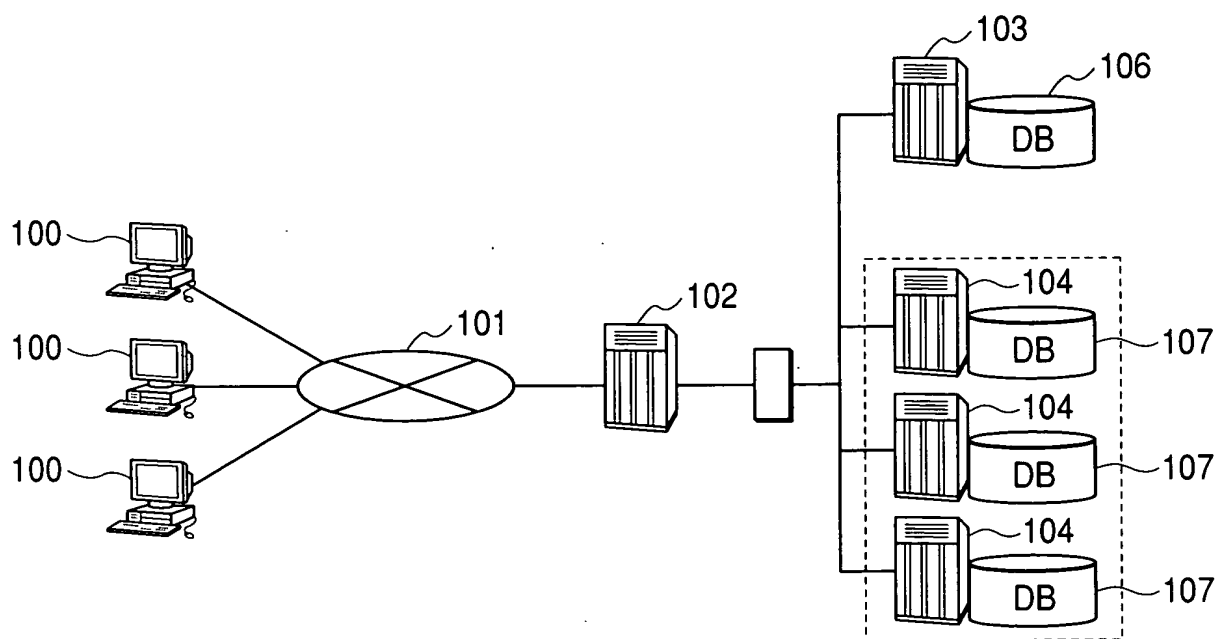


**FIG. 21**



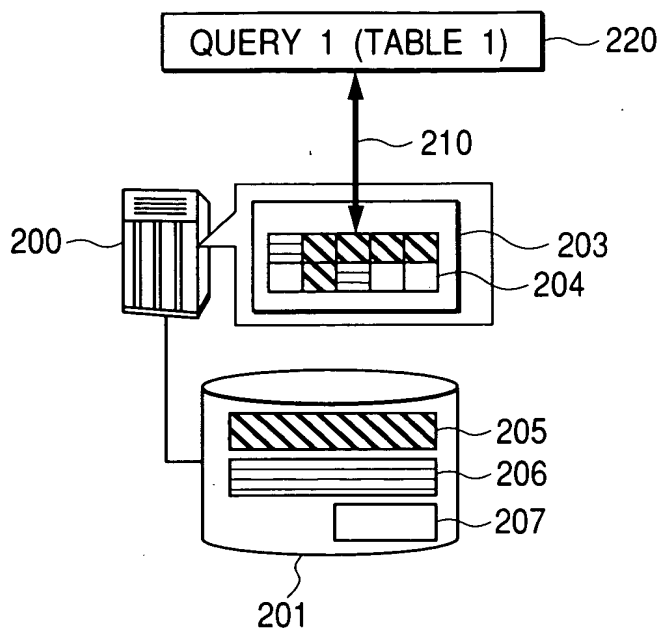
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**FIG. 22**

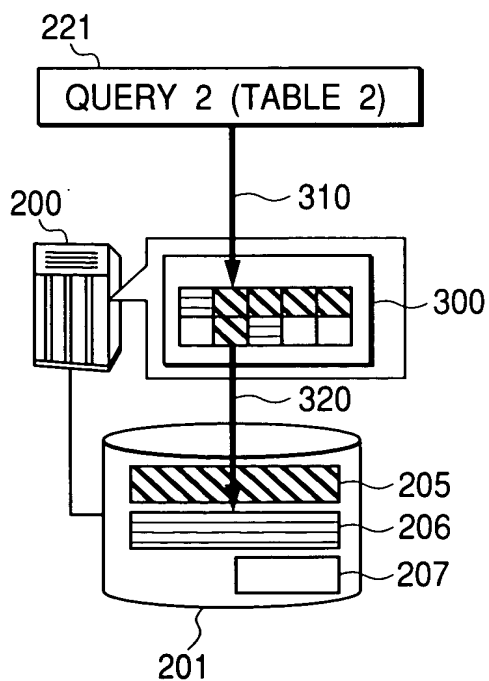


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**FIG. 23**



**FIG. 24A**



**FIG. 24B**

